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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,248	08/27/2003	Takahiro Umada	1080.1129	3679

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EXAMINER	
BERNATZ, KEVIN M	

ART UNIT	PAPER NUMBER
1773	

DATE MAILED: 02/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/648,248	UMADA ET AL.	
	Examiner	Art Unit	
	Kevin M Bernatz	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☒ Claim(s) *4,5 and 14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/27/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Examiner's Comments

1. Regarding the limitation(s) "metallic foil" in claims 2 - 7, the Examiner has given the term(s) the broadest reasonable interpretation(s) consistent with the written description in applicants' specification as it would be interpreted by one of ordinary skill in the art. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); *In re Donaldson Co., Inc.*, 16 F.3d 1190, 1192-95, 29 USPQ2d 1845, 1848-50 (Fed. Cir. 1994). See MPEP 2111. Specifically, any pure metallic compound is deemed to read on the limitation "metallic foil", but resin + particle compounds are excluded.

Drawings

2. The Drawings filed August 27, 2003 are accepted.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1 – 14 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 - 10 of copending Application No. 10/863,875. See U.S. Patent App. No. 2004/0224119 A1, which is the published version of application '875. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Although the conflicting claims are not identical, they are not patentably distinct from each other because App '875 recites a substrate, first soft magnetic layer, cured resin layer having a servo pattern (i.e. applicants' claimed "pre-groove pattern"), a recording reproducing layer and protective layer, in this order (*claims 1 and 10*). The limitations "wherein a ratio ... first soft magnetic layer" in claim 1 are apparatus limitations and are not further limiting in so far as the structure of the *product* is concerned, provided the product is capable of meeting the claimed limitations. Given that the product discloses a soft magnetic material as the "first soft magnetic layer", the product is clearly capable of meeting the claimed limitation since it is exclusively dependent on the use of the product in a head, such that the head possesses a Bs x t value meeting the claimed limitation.

Regarding claims 8 and 9, since the cured resin layer is obviously *on* the medium product, the Examiner deems that the substrate necessarily meets the limitation of

having a "preventing structure for preventing the cured resin layer from going out from the first soft magnetic layer when the cured resin layer is in a non-cured state".

Regarding claims 10 – 13, while App. '875 does not explicitly claim these magnetic compounds, the Examiner notes that these materials are art recognized equivalent soft magnetic materials to FeC as shown by Paragraph 0048 of App. '875. The Examiner notes that above referred to disclosure sections are properly relied upon since "those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in the application defines an obvious variation of an invention claimed in the patent" (MPEP § 804).

Claim Objections

5. Claims 4, 5 and 14 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 4, 5 and 14, while worded slightly different, cover identical scope as the claims from which they depend since the language "is put on the substrate" (claims 4 and 5) or "is coated on the substrate" (claim 14) does not add any additional structure when compared with "formed on the substrate".

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1 – 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamakage et al. (U.S. Patent App. No. 2004/0224119 A1).

Yamakage et al. disclose the claimed invention as recited above in Paragraph 4. The Examiner notes that this rejection is predicated on the effective filing date of December 25, 2001 per subsection 102(e)(2), as noted above.

8. Claims 1 – 11 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Iwabuchi et al. (U.S. Patent No. 5,287,334).

Regarding claims 1 – 7 and 14, Iwabuchi et al. disclose a magneto-optical recording medium (*Title*) comprising a substrate (*Figure 6, element 31*), a first soft magnetic layer (*element 32*) formed on the substrate, a cured resin layer formed on the first soft magnetic layer having a pre-groove pattern on a surface to a back of the cured resin layer (*element 33 and col. 6, line 45*) contacting with the first soft magnetic layer, a recording reproduction layer (*element 34*) formed on the cured resin layer, and a

protective film layer (*element 36*) formed on the recording reproduction layer, wherein the magneto-optical recording medium receives an irradiation of a light for recording reproduction and a supply of a magnetic field form a side of the protecting film layer (*Figure 6*), and wherein the first soft magnetic film is formed of a metallic foil (*Figure 6 and col. 6, lines 48 – 55*).

The limitations "wherein a ratio ... first soft magnetic layer" in claim 1 are apparatus limitations and are not further limiting in so far as the structure of the *product* is concerned, provided the product is capable of meeting the claimed limitations. Given that the product discloses a soft magnetic material as the "first soft magnetic layer", the product is clearly capable of meeting the claimed limitation since it is exclusively dependent on the use of the product in a head, such that the head possesses a Bs x t value meeting the claimed limitation.

Regarding claims 8 and 9, since the cured resin layer is obviously *on* the medium product, the Examiner deems that the substrate necessarily meets the limitation of having a "preventing structure for preventing the cured resin layer from going out from the first soft magnetic layer when the cured resin layer is in a non-cured state".

Regarding claims 10 and 11, Iwabuchi et al. disclose FeNi material (i.e. permalloy) (*col. 6, line 51*).

9. Claims 1 – 11 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakajima (U.S. Patent No. 6,212,137 B1).

Regarding claims 1 – 7 and 14, Nakajima discloses a magneto-optical recording medium (*Title*) comprising a substrate (*Figure 24, element 15*), a first soft magnetic layer (*element 12*) formed on the substrate, a cured resin layer formed on the first soft magnetic layer having a pre-groove pattern on a surface to a back of the cured resin layer (*element 16 and col. 14, lines 62 - 67*) contacting with the first soft magnetic layer, a recording reproduction layer (*element 3*) formed on the cured resin layer, and a protective film layer (*element 7*) formed on the recording reproduction layer, wherein the magneto-optical recording medium receives an irradiation of a light for recording reproduction and a supply of a magnetic field form a side of the protecting film layer (*Figure 24*), and wherein the first soft magnetic film is formed of a metallic foil (*Figure 24 and col. 15, lines 6 - 7*).

The limitations "wherein a ratio ... first soft magnetic layer" in claim 1 are apparatus limitations and are not further limiting in so far as the structure of the *product* is concerned, provided the product is capable of meeting the claimed limitations. Given that the product discloses a soft magnetic material as the "first soft magnetic layer", the product is clearly capable of meeting the claimed limitation since it is exclusively dependent on the use of the product in a head, such that the head possesses a Bs x t value meeting the claimed limitation.

Regarding claims 8 and 9, since the cured resin layer is obviously *on* the medium product, the Examiner deems that the substrate necessarily meets the limitation of

having a "preventing structure for preventing the cured resin layer from going out from the first soft magnetic layer when the cured resin layer is in a non-cured state".

Regarding claims 10 and 11, Nakajima discloses FeNi material (i.e. permalloy) (*col. 15, lines 6 - 7*).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakajima as applied above, and further in view of Shimizu et al. (U.S. Patent App. No. 2002/0012816 A1).

Nakajima is relied upon as described above.

Nakajima fails to disclose using CoZrNb as a soft magnetic material for the soft magnetic layer.

However, the Examiner deems that Permalloy and CoZrNb are known equivalents in the field of soft magnetic alloys, as taught by Shimizu et al. (*Paragraph 0079*).

Substitution of equivalents requires no express motivation as long as the prior art recognizes the equivalency. In the instant case, Permalloy (NiFe) and CoZrNb are equivalents in the field of soft magnetic alloys. *In re Fount* 213 USPQ 532 (CCPA

1982); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *Graver Tank & Mfg. Co. Inc. v. Linde Air Products Co.* 85 USPQ 328 (USSC 1950).

12. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwabuchi et al. as applied above, and further in view of Shimizu et al. ('816 A1).

Iwabuchi et al. is relied upon as described above.

Iwabuchi et al. fail to disclose using CoZrNb as a soft magnetic material for the soft magnetic layer.

However, the Examiner deems that Permalloy and CoZrNb are known equivalents in the field of soft magnetic alloys, as taught by Shimizu et al. (*Paragraph 0079*).

Substitution of equivalents requires no express motivation as long as the prior art recognizes the equivalency. In the instant case, Permalloy (NiFe) and CoZrNb are equivalents in the field of soft magnetic alloys.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M Bernatz whose telephone number is (571) 272-1505. The examiner can normally be reached on M-F, 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin M. Bernatz, PhD
Primary Examiner

KMB
February 7, 2005